

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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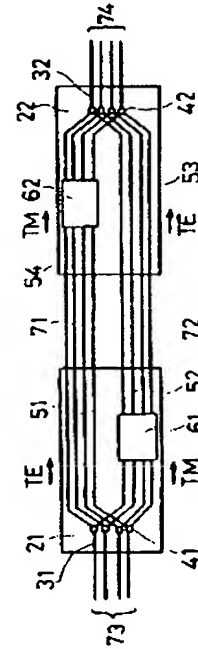
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TITLE : OPTICAL CIRCUIT ELEMENT



**ABSTRACT :** PURPOSE: To facilitate the assembly, and to decrease the connection parts of a 1st substrate, a converting means, and a 2nd substrate and reduce the insertion loss by integrating a 1st (2nd) polarized light separating element, 1st (3rd) and 2nd (4th) waveguides, and a 1st optical function element on a 1st (2nd) substrate and connecting the 1st and 2nd substrates by the converting means.

**CONSTITUTION:** On the 1st substrate 21, the 1st polarized light separating element 41, the 1st waveguide 51, and the 2nd waveguide are formed and in the 1st waveguide 52, the 1st optical function element, e.g. an optical matrix switch 61 is provided. On the 2nd substrate 22, on the other hand, the 2nd polarized light separating element 42, the 3rd waveguide 53, and the 4th waveguide 54 are formed and on the 4th waveguide 54, a 2nd optical function element, e.g. an optical matrix switch 62 is provided. Then the 1st and 4th waveguides 51 and 54 and the 2nd and 3rd waveguides 52 and 53 are connected through two converting means, e.g. 1st and 2nd polarized wave maintaining type optical fibers 71 and 72. Consequently, the insertion loss is small and the assembly is facilitated.

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